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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,063	11/21/2001	Yoshimi Kawanami	1082.1041	1041

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EXAMINER

GUHARAY, KARABI

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/989,063	Applicant(s) KAWANAMI ET AL.	
	Examiner Karabi Guharay	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,9-13 and 17-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,9-13 and 17-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/03</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3, 10, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim (US 5972528).

Regarding claims 3 & 23, Kim discloses a plasma display (Fig 1) comprising a rib structure (Fig 2) comprising a light transmissive rib (13 of Fig 1) containing frit glass which is a light transmissive material containing a material (ferric oxide and cobalt oxide) which is absorbent of visible light. This black pigment is added to the rib structure in order to enhance contrast, thus inherently having larger contrast coefficient $((\text{brightness})^2 / (\text{diffuse reflectance}))$ than a rib structure not containing light absorbent material, like ferric oxide or cobalt oxide (lines 25-50 of column 3), wherein a discharge space is partitioned by the rib structure 13 (see Fig 1), a phosphor layer 14 provided on a side of the rib structure 13 (line 29-30 of column 1), and the rib structure contains the filler (boric oxide, zinc oxide silicon oxide and barium oxide in the frit glass, lines 51-54 of column 3).

Regarding claim 10, Kim discloses a plasma display (Fig 1) where a discharge space is partitioned by the rib structure (13) set forth in claim 3 (lines 15-30 of column 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4, 11 & 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US 5972528).

Regarding claims 4, 11, and 25, Kim discloses a plasma display comprising a rib structure (13) for a display device (plasma display, Fig 1) comprising a sintered glass material containing a black pigment containing a metal oxide as a major component (lines 46-50 of column 3), where a discharge space is partitioned by the rib structure (13) and a phosphor layer 14 is provided on a side of the rib structure (13, lines 15-30 of column 1).

But, Kim discloses 0.4 wt % of black pigment present in the glass instead of claimed 0.01–0.3 wt % of black pigment.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to find the optimum range of 0.01-0.3 wt % of black pigment in the glass composition of Kim, since it has been held that where the general

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conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. ***MPEP 2144.05 II A***

Claims 1, 5-6, 9, & 12-13, 21, 26, and 28 are rejected under 35 U.S.C. 103(a) as being obvious over Katayama et al. (US 6498431).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding claims 1 & 21, Katayama et al. discloses a plasma display (see Fig 1) comprising a light-transmissive rib structure containing visible light absorption material (FeO, or Cr₂O₃), a discharge space is partitioned by the rib structure (29, lines 6-10 of column 4, Fig 1), a phosphor layer (28R, 28G, 28B) is provided on a side of the rib structure (lines 16-20 of column 4), and the rib structure contains a filler (silicon dioxide, lines 6367 of column 5).

However, Katayama does not specifically mention the visible light absorption distance being in the range of 40-1200 micron. It is noted that this further limitation recites the function of the rib structure.

It is elementary that mere recitation of a newly discovered function or property, inherently possessed by same structure in the prior art, does not cause a claim drawn to

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distinguish over the prior art. Additionally, where the Patent office has the reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an intrinsic characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on. *In Re Swinehart*, 169 USPQ 226(CCPA 1971). Thus, the functional limitation of visible light absorption distance is 40-1200 micron is taught by Katayama et al. under intrinsic functional principles.

Regarding claims 5-6 & 26, and 28, Katayama discloses a rib structure (29 of Fig 2a & Fig 2b) for a display device (shown in Fig 1) comprising a light transmissive material (frit glass, lines 4-9 of column 6) containing 0.03-1wt % of fine metal particle such as (FeO, or Cr₂O₃) which are absorbent of visible light having average particle size of several micron (lines 46-52 of column 7), a discharge space is partitioned by the rib structure (29, lines 6-10 of column 4, Fig 1), a phosphor layer (28R, 28G, 28B) is provided on a side of the rib structure (lines 16-20 of column 4), and the rib structure contains a filler (silicon dioxide, lines 63-67 of column 5).

Though Katayama et al. do not explicitly specify that the average particle size is 3 micron or less, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use particles having average diameter of 3 micron or less since it has been held that where the general conditions of a claim are disclosed in the prior art, in this case prior art teaches fine particles having diameter of several microns, discovering the optimum or workable ranges involves only routine skill in the art.

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Regarding claim 9, Katayama discloses a discharge space partitioned by the rib structure 29 set forth in claim 1 (see Fig 1, lines 6-10 of column 4).

Regarding claims 12-13, Katayama et al. disclose a discharge space partitioned by the rib structure (29, lines 6-10 of column 4 & Fig 1).

Claims 17, 19-20, 22, 27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama et al., as applied to claims 1, 5-6, 23, 26, 26 above, and further in view of Sreeram et al. (US 6140767).

Regarding claims 17, 19-20, 22, 27 & 29, Katayama discloses all the limitations of above claims except for the limitation of filler being aluminum oxide.

However, Sreeram et al. discloses a barrier rib structure for a plasma display where Sreeram et al. teach various suitable filler material such as aluminum oxide for making (see Table 3, and Lines 47-55 of column 4) ceramic green tape for ribs.

It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use aluminum oxide as a filler material in the glass composition of Katayama et al., since aluminum oxide is a suitable filler material for making green tape for ribs. *In re Leshin*, 125 USPQ 416.

Claims 18, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim as applied to claim 3 above, and further in view of Sreeram et al. (US 6140767).

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Regarding claims 18 and 24, Kim discloses all the limitations of claims 18 and 24, except for the limitation of filler being aluminum oxide.

However, Sreeram et al. discloses a barrier rib structure for a plasma display where Sreeram et al. teach various suitable filler material such as aluminum oxide for making (see Table 3, and Lines 47-55 of column 4) ceramic green tape for ribs.

It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use aluminum oxide as a filler material in the glass composition of katayama et al. since aluminum oxide is a suitable filler material for making green tape for ribs. *In re Leshin*, 125 USPQ 416.

Response to Arguments

Applicant's arguments, filed 11/10/03 have been fully considered but they are not persuasive.

In response to applicant's argument, examiner wants to point out that Kim discloses a filler material for the rib structure, see lines 52-55 of column 3.

Since Kim teaches that rib contains black pigment in order to enhance contrast, it is inherent that the contrast which is expressed by, contrast coefficient $((\text{brightness})^2 / (\text{diffuse reflectance}))$ of the Kim's rib structure will have larger contrast ratio than a rib structure not containing light absorbent material.

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

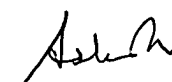
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (571) 272-2452. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Karabi Guharay
Patent Examiner
Art Unit 2879


ASHOK PATEL
PRIMARY EXAMINER